

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	M.L. Bayne et al.	
Serial No.:	To be assigned	Case No. 18199CB
Filed:	Submitted on even date herewith	
For:	DNA MOLECULES ENCODING VASCULAR ENDOTHELIAL CELL GROWTH FACTOR II SUBUNITS (As Amended Herein)	
		1646
		Examiner: L. Spector

Assistant Commissioner of Patents
Washington, D.C. 20231

PRELIMINARY AMENDMENT, 37 C.F.R. §1.111, 1.115

Sir:

Preliminary to the examination of this Rule 53(b) continuation application, please calculate the filing fee due based on entry of new claims 22-37. Please enter the additional amendments and consider the following remarks. This application is co-pending to U.S. Application Serial No. 09/326,879, filed June 7, 1999. A Notice of Appeal was filed in the '879 application on September 10, 2001. A Petition to Extend Time under 37 C.F.R. §1.136(a) for three (3) months is entered on an even date herewith to continue pendency of the '879 application up to and including Monday, February 11, 2002. Applicants intend to cease further prosecution of the '879 case in favor of this above-identified continuation application.

EXPRESS MAIL CERTIFICATE
DATE OF DEPOSIT February 8, 2002
EXPRESS MAIL NO EL523909946 US
I HEREBY CERTIFY THAT THIS CORRESPONDENCE IS
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MAILED BY Christie Cuffe
DATE 2-8-02

IN THE SPECIFICATION:

At page 1, line 2, please delete the title "VASCULAR ENDOTHELIAL CELL GROWTH FACTOR II" and insert a new title --DNA MOLECULES ENCODING VASCULAR ENDOTHELIAL CELL GROWTH FACTOR II SUBUNITS--.

At page 1, line 5, delete the continuing data and add the following continuing data:

-- This application is a continuation application of application no. 09/326,879, filed June 7, 1999, which is a divisional of application no. 09/038,199, filed March 10, 1998, issued as U.S. Patent No. 6,180,107, which is a divisional of application no. 08/299,185, filed August 31, 1994, issued as U.S. Patent No. 5,726,152, which is a continuation-in-part of application no. 08/000,834, filed January 5, 1993, abandoned, which is a continuation of application no. 07/586,638, filed September 21, 1990, abandoned. --.

At page 2, line 22, following "Figure 5", please insert --and Figures 5A through 5C--.

At page 2, line 26, following "Figure 6", please insert --and Figures 6A through 6B--.

At page 2, line 32 following "Figure 7", please insert --and Figure 7A--.

At page 10, line 22, please delete "Figure 4" and insert --Figures 4 through 4M--.

At page 11, line 5, please delete "Figure 4" and insert --Figures 4 through 4M--.

At page 11, line 11, please delete "Fig. 4 and Fig. 5" and insert --Figures 4 through 4M and Figures 5 through 5C--.

At page 11, line 27, please delete "Figure 4" and insert --Figures 4 through 4M--.

At page 11, line 33, please delete "Fig. 5 and Fig. 6" and insert --Figures 5 through 5C and Figures 6 through 6B--.

At page 12, line 5, please delete "Figs. 4 and 5" and insert --Figures 4 through 4M and Figures 5 through 5C--.

At page 13, line 3, please delete "Fig. 6 and Fig. 7" and insert --Figures 6 through 6B and Figures 7 through 7A--.

At page 23, line 15, please delete "Figs. 5 and 6" and insert -- --Figures 5 through 5C and Figures 6 through 6B--.

At page 23, line 16, please delete "Fig. 5" and insert --Figures 5 through 5C--.

At page 23, line 17, please delete "Fig. 6" and insert --Figures 6 through 6B--.

At page 29, line 13, please delete "Fig. 5" and insert --Figures 5 through 5C--.

At page 37, line 25 please delete "Figures 6 and 7" and insert --Figures 6 through 6B and Figures 7 through 7A--.

At page 39, line 31, please delete "Fig. 6 and Fig. 7" and insert --Figures 6 through 6B and Figures 7 through 7A--.

At page 39, line 33, please delete "Fig. 7" and insert --Figures 7 through 7A--.

At page 40, line 1, please delete "Fig. 7" and insert --Figures 7 through 7A--.

At page 42, line 20, please delete "Fig. 6" and insert --Figures 6 through 6B--.

IN THE CLAIMS:

Please cancel claims 1-21, without prejudice.

Please enter new claims 22-37, as follows:

22(New). A purified DNA molecule encoding a B subunit of vascular endothelial growth factor II wherein said B subunit comprises the 158 amino acid precursor protein as shown in Figure 6.

23(New). An expression vector for expressing a B subunit of vascular endothelial growth factor II in a recombinant host cell wherein said expression vector comprises a DNA molecule of claim 22.

24(New). A host cell which expresses a recombinant a B subunit of vascular endothelial growth factor II wherein said host cell contains the expression vector of claim 23.

25(New). A process for expressing a B subunit of vascular endothelial growth factor protein in a recombinant host cell, comprising:

(a) transfecting the expression vector of claim 23 into a suitable host cell; and,

(b) culturing the host cells of step (a) under conditions which allow expression of said B subunit of vascular endothelial growth factor protein from said expression vector.

26(New). A purified DNA molecule encoding a B subunit of vascular endothelial growth factor II wherein said B subunit comprises the 135 amino acid mature protein as shown in Figure 6.

27(New). An expression vector for expressing a B subunit of vascular endothelial growth factor II in a recombinant host cell wherein said expression vector comprises a DNA molecule of claim 26.

28(New). A host cell which expresses a recombinant a B subunit of vascular endothelial growth factor II wherein said host cell contains the expression vector of claim 27.

29(New). A process for expressing a B subunit of vascular endothelial growth factor protein in a recombinant host cell, comprising:

(a) transfecting the expression vector of claim 27 into a suitable host cell; and,

(b) culturing the host cells of step (a) under conditions which allow expression of said B subunit of vascular endothelial growth factor protein from said expression vector.

30(New). A purified DNA molecule encoding a B subunit of vascular endothelial growth factor II wherein said B subunit comprises the 138 amino acid precursor protein as shown in Figure 7.

31(New). An expression vector for expressing a B subunit of vascular endothelial growth factor II in a recombinant host cell wherein said expression vector comprises a DNA molecule of claim 30.

32(New). A host cell which expresses a recombinant a B subunit of vascular endothelial growth factor II wherein said host cell contains the expression vector of claim 31.

33(New). A process for expressing a B subunit of vascular endothelial growth factor protein in a recombinant host cell, comprising:

(a) transfected the expression vector of claim 31 into a suitable host cell; and,

(b) culturing the host cells of step (a) under conditions which allow expression of said B subunit of vascular endothelial growth factor protein from said expression vector.

34(New). A purified DNA molecule encoding a B subunit of vascular endothelial growth factor II wherein said B subunit comprises the 115 amino acid mature protein as shown in Figure 7.

35(New). An expression vector for expressing a B subunit of vascular endothelial growth factor II in a recombinant host cell wherein said expression vector comprises a DNA molecule of claim 34.

36(New). A host cell which expresses a recombinant a B subunit of vascular endothelial growth factor II wherein said host cell contains the expression vector of claim 35.

37(New). A process for expressing a B subunit of vascular endothelial growth factor protein in a recombinant host cell, comprising:

- (a) transfecting the expression vector of claim 35 into a suitable host cell; and,
- (b) culturing the host cells of step (a) under conditions which allow expression of said B subunit of vascular endothelial growth factor protein from said expression vector.

R E M A R K S

Original claims 1-21 are cancelled, without prejudice.

New claims 22-37 are respectfully entered. New claims 22-37 correspond to allowed subject matter from U.S. Application Serial No. 09/326,879, as follows:

	<u>'879 Application</u>	<u>New Claims</u>
Claim #		
	26	22
	27	23
	28	24
	29	25
	30	26
	31	27
	32	28
	33	29
	34	30
	35	31
	36	32
	37	33
	38	34
	39	35
	40	36
	41	37

The specification was amended in anticipation of utilizing the same formal drawings as used in U.S. Patent No. 5,726,152, as well as updating the continuing data. Applicants respectfully note that reference should be made to appl. no. 07/586,638, not 07/586,631.

New claims 22-37 mirror allowed claims from the '879 application as noted above. Applicants reserve the right to pursue non-elected and/or non-recited subject matter in a future continuing application. No new matter is added by entry of new claims 22-37. Applicants respectfully take the position that the pending claims remain allowable. If necessary, the Examiner is invited to contact the undersigned attorney by telephone if clarification is required on any aspect of this response.

Respectfully submitted,

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Date: February 8, 2002

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: M. Bayne et al.

Art Unit:
1647

Serial No.: 09/326,879 – Case 18199CB

Examiner:
L. Spector

Filed: Concurrently herewith (Express Mail EL523909946US)

For: VASCULAR ENDOTHELIAL CELL GROWTH
FACTOR II

Assistant Commissioner of Patents
Washington, D.C. 20231

ATTENTION: Official Draftsman

TRANSMITTAL OF FORMAL DRAWINGS

Sir:

Submitted herewith are new drawings to correct the informalities in the originally submitted drawings. Enclosed please find thirty two (32) sheets of formal drawings (Figs 1-11).

Should communication with the undersigned representative facilitate the review and the acceptance of the enclosed drawings, the Official Draftsman is invited to telephone the representative at the number listed below.

Respectfully submitted,

By J. Mark Hand
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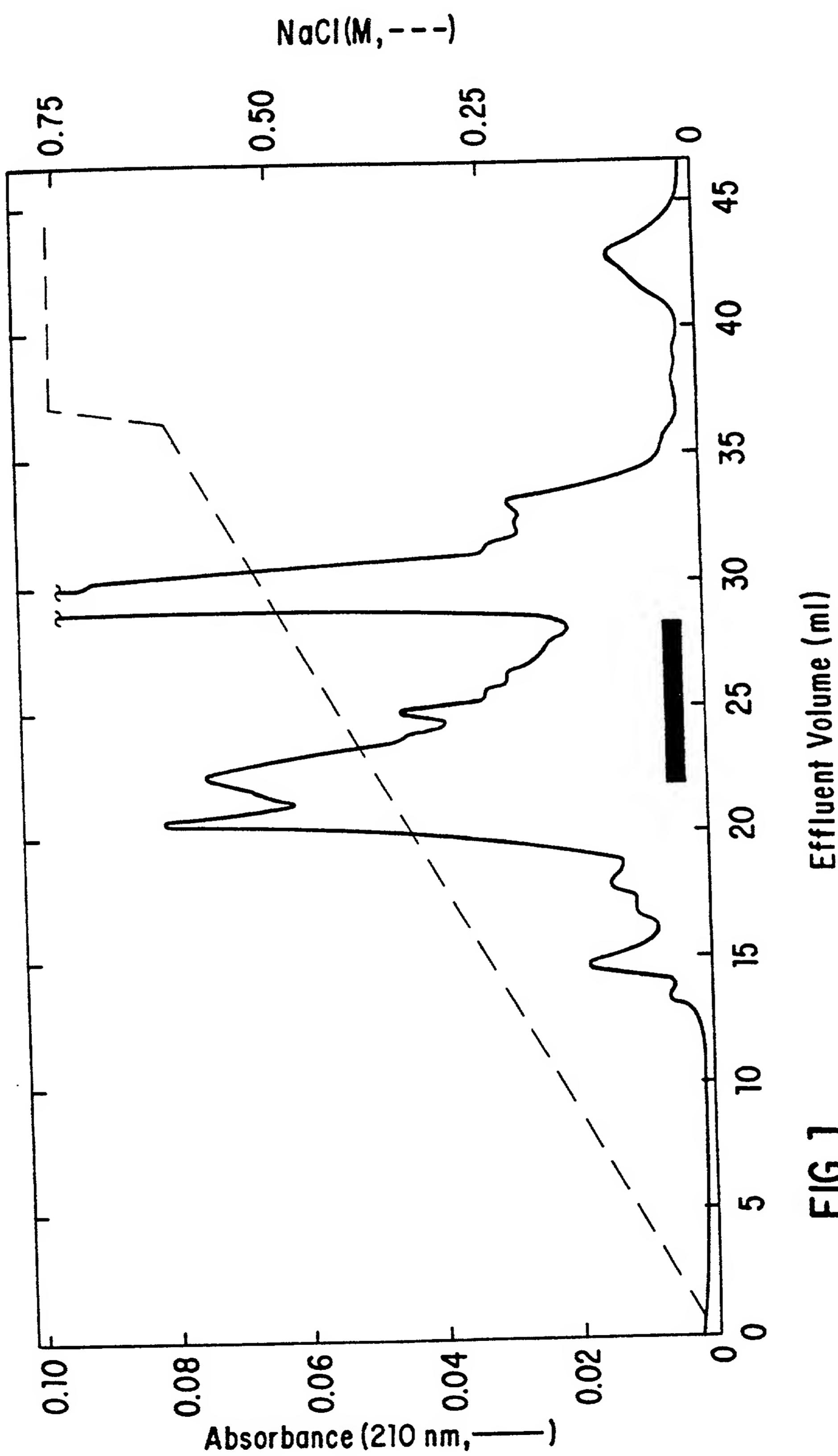
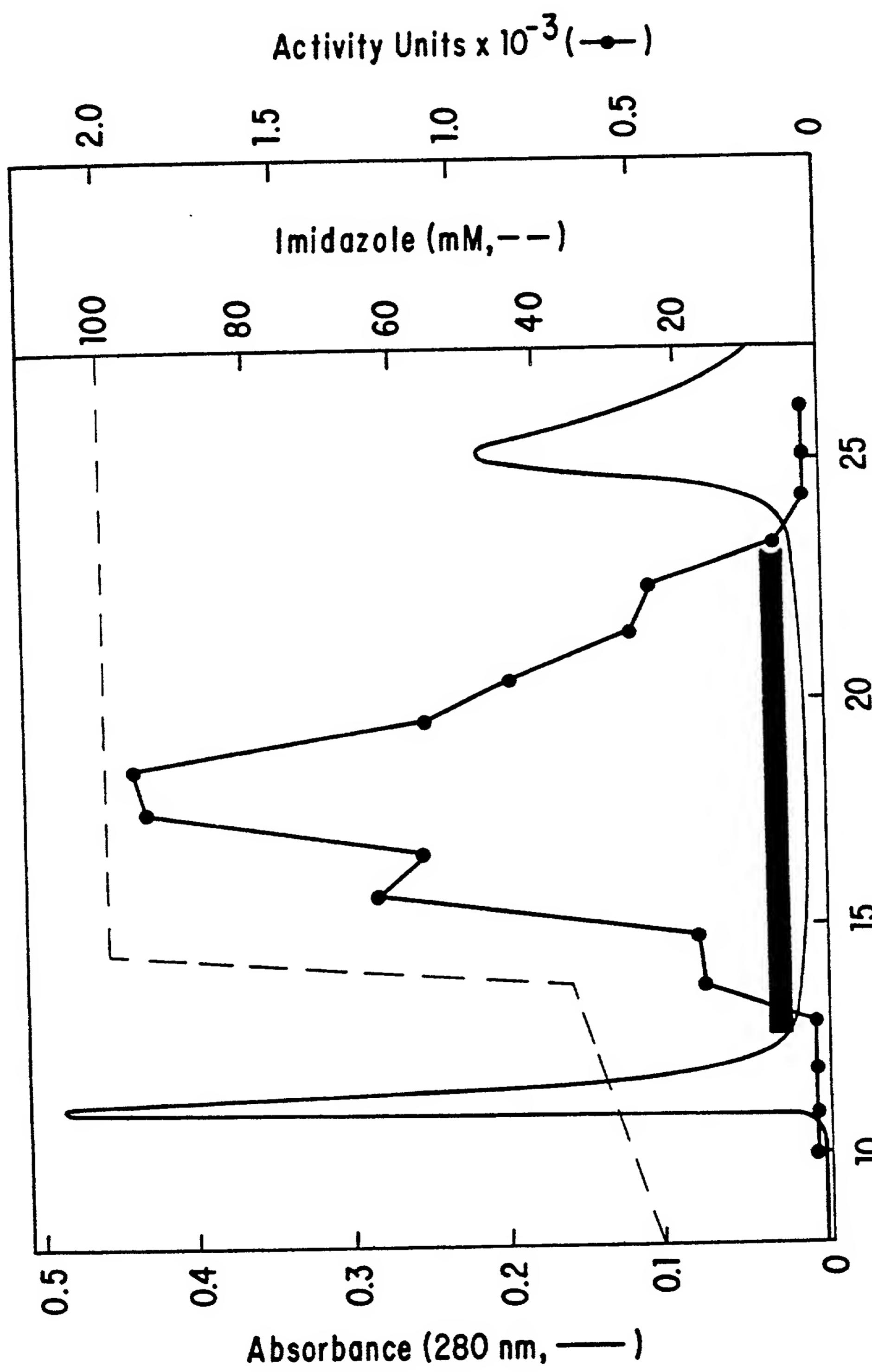


FIG. 1

Effluent Volume (ml)

FIG. 2



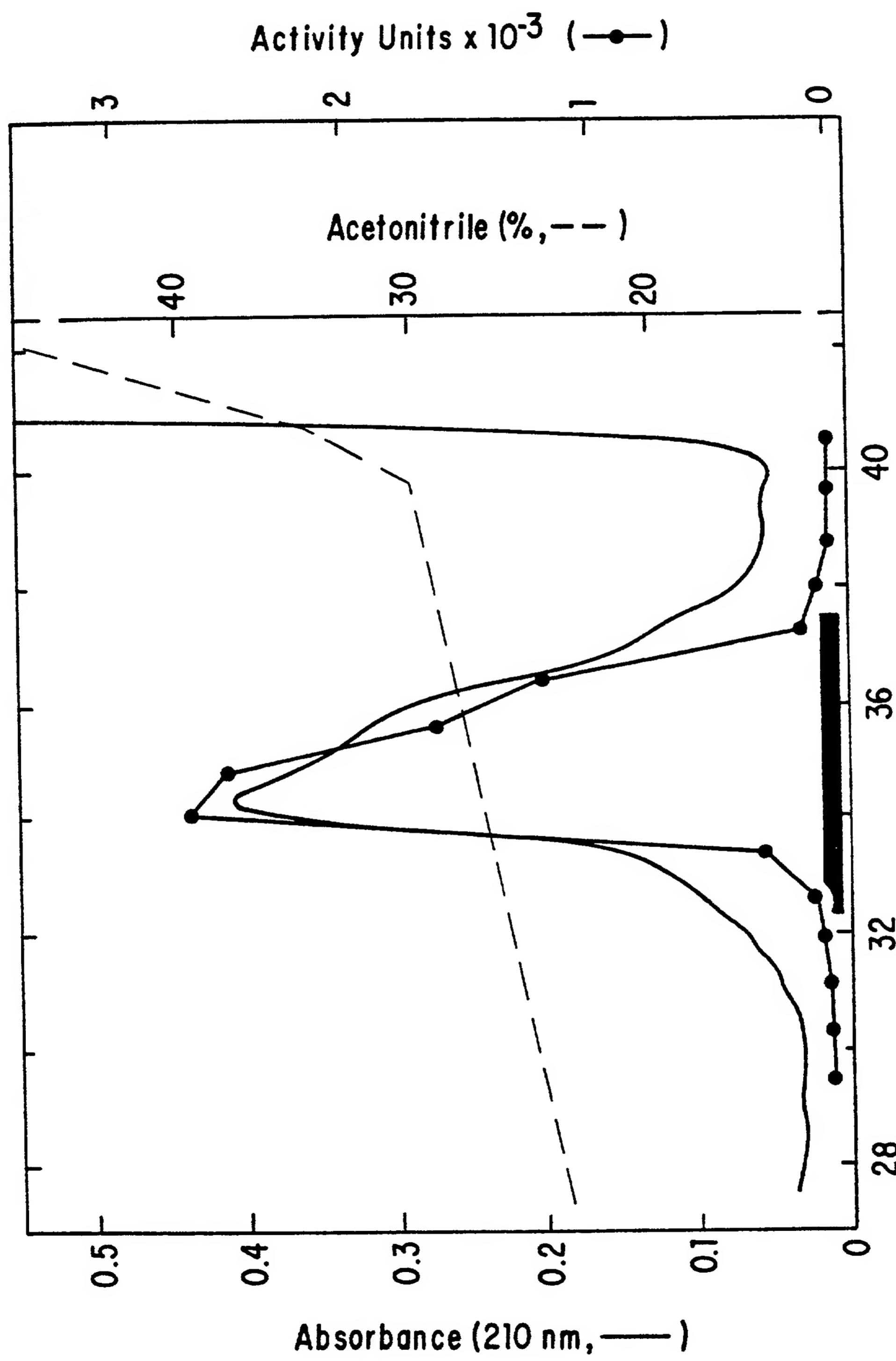


FIG. 3

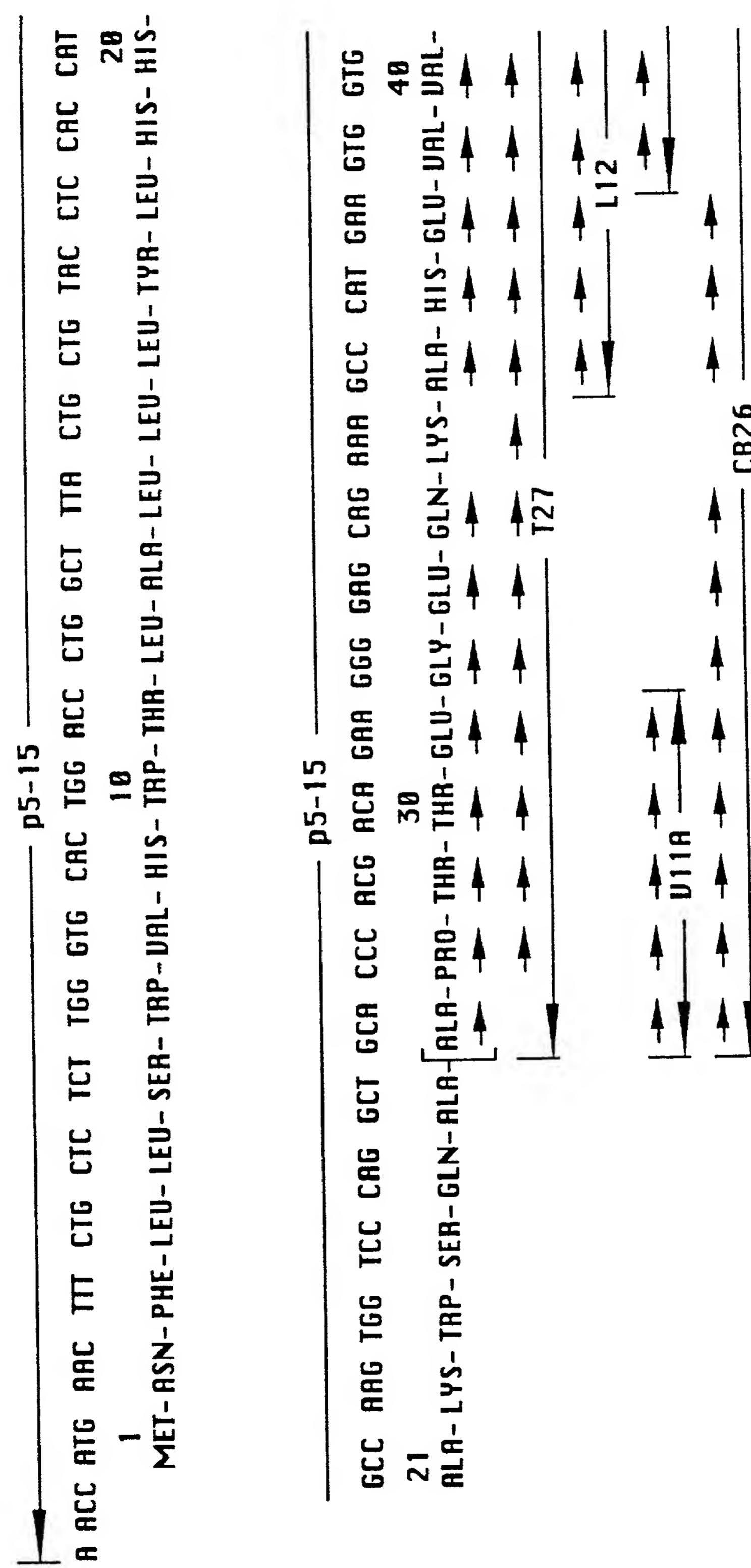


FIG. 4

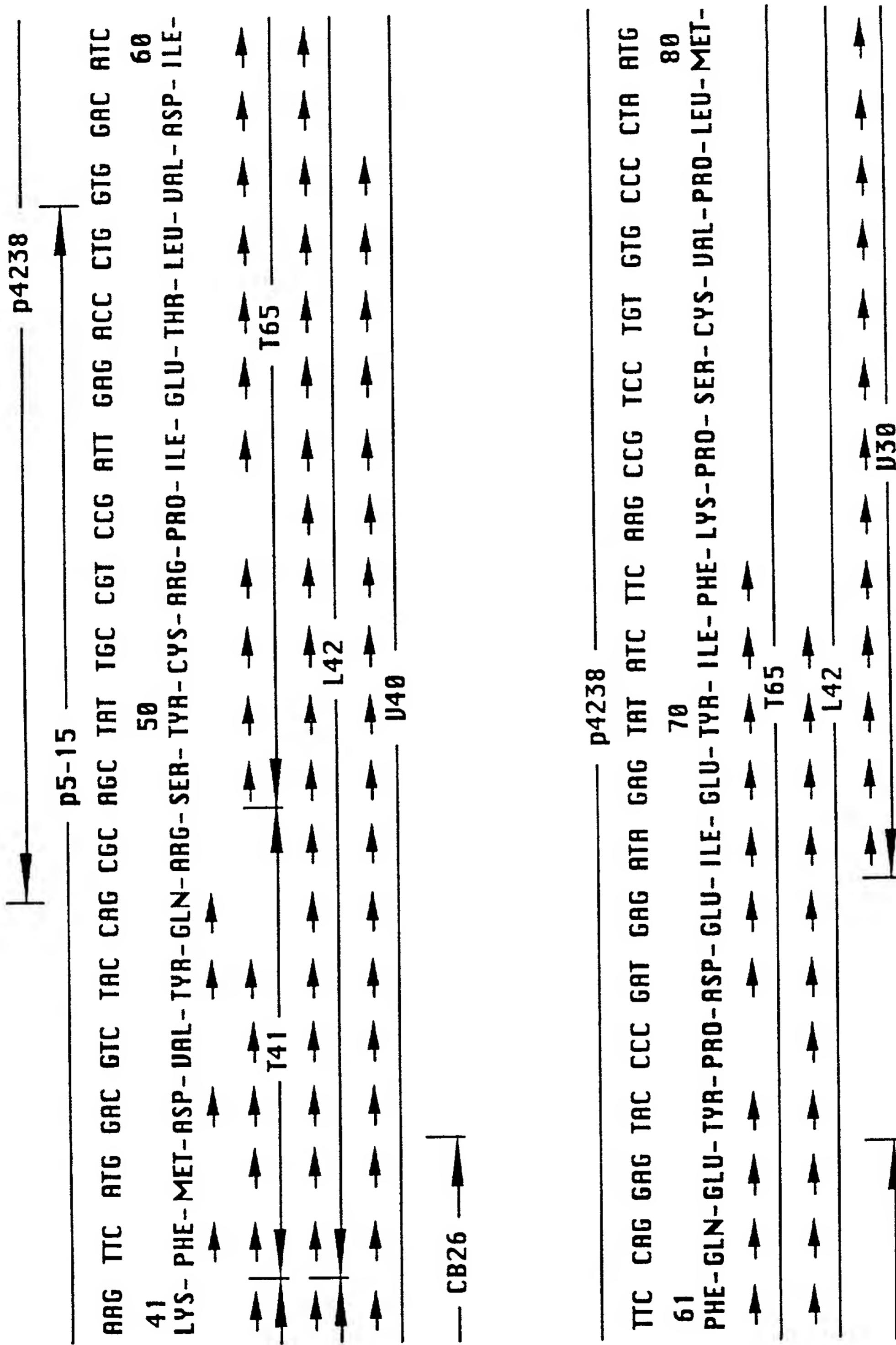


FIG. 4A

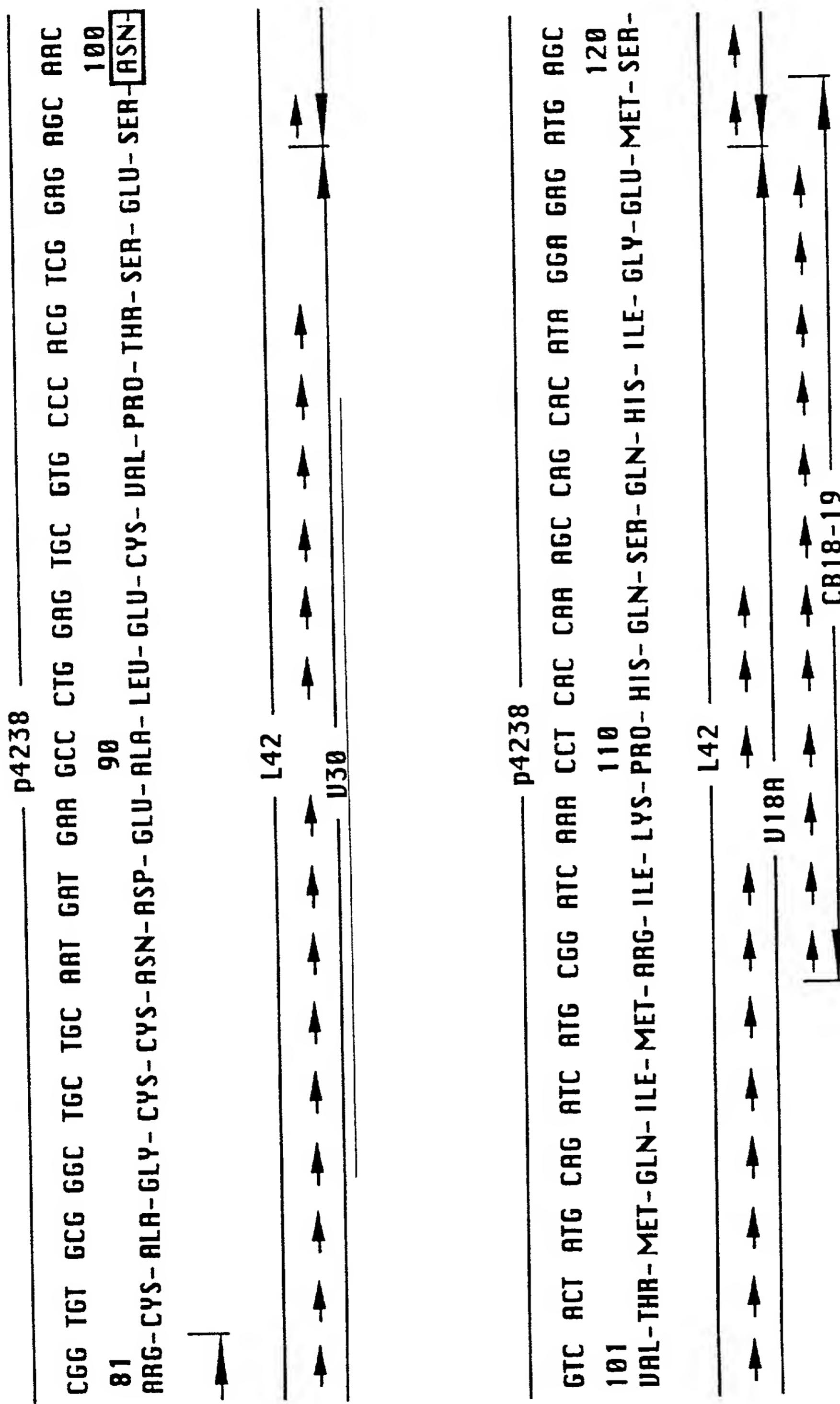


FIG. 4B

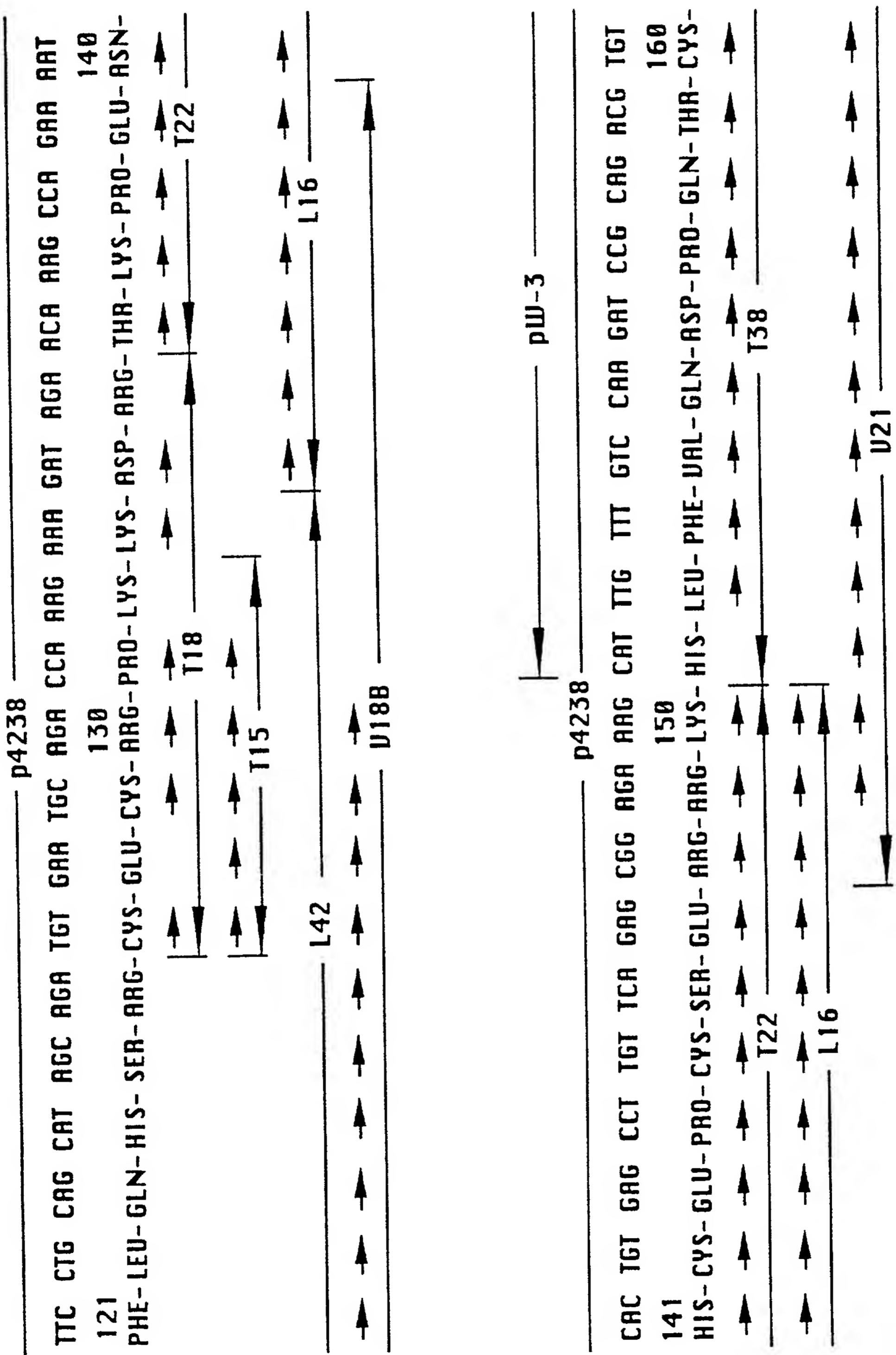


FIG. 4C

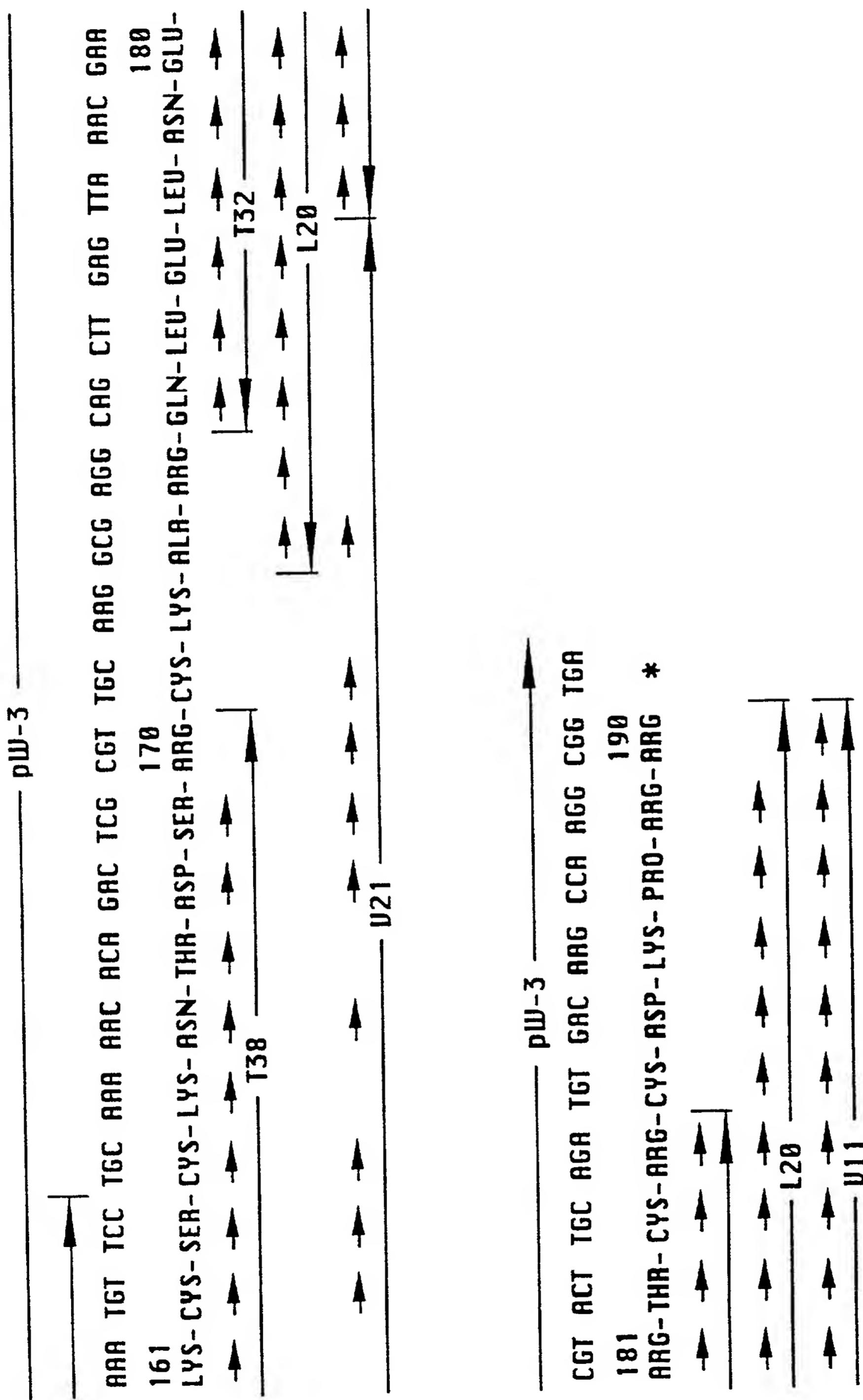


FIG. 4D

FIG 4E

— p4238 —

CGG TGT GCG GGC TGC TGC AAT GAT GAA GAG TGC GAG CCC ACC TCG GAG AAC
81 ARG-CYS-ALA-GLY-CYS-CYS-ASN-ASP-GLU-ALA-LEU-GLU-SER-THR-PRO-VAL-SER-ASN-
90 100

— p4238 —

101 GTC ACT ATG CAG ATC ATG CGG ATC AAA CCT CAC CAC CAG CAA AGC AGC AGC
110 VAL-THR-MET-GLN-ILE-LYS-PRO-HIS-GLN-SER-HIS-GLY-GLU-MET-SER-
119 120

FIG. 4E

FIG. 4G

CGT ACT TGC AGA TGT GAC AAG CCA AGG CGG TGA
 181 ARG-THR-CYS-ARG-CYS-ASP-LYS-PRO-ARG-ARG
 plw-3

FIG. 4H

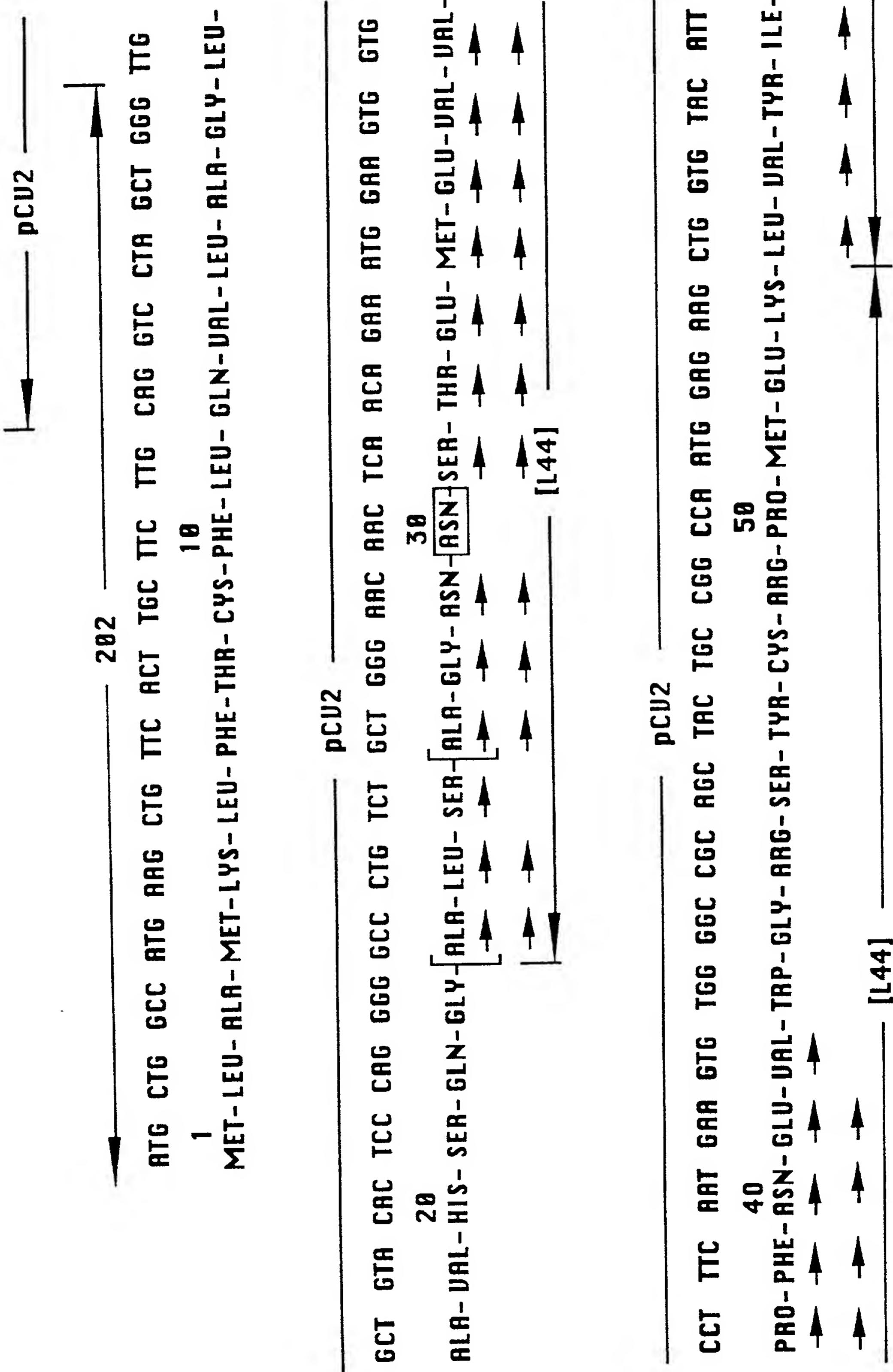


FIG. 4I

FIG. 4

pcv2 —
 120 ACA TTC TCT CAG GAT GTC CTC TGC GAA TGC AGG CCT ATT CTG GAG ACG ACA AAC GCA GAA
 130 THR-PHE-SER-GLN-ASP-VAL-LEU-CYS-GLU-CYS-ARG-PRO-ILE-LEU-GLU-THR-LYS-ALA-GLU-
 ——————
 [L44]

FIG. 4K

1 MET-LEU-ALA-MET-LYS-LEU-PHE-THR-CYS-PHE-LEU-GIN-VAL-LEU-GLY-LEU-
 10

202 ATG CTG GCC ATG AAG CTG TTG ACT TGC TTG CAG GTC CTA GCT GGG TTG
 pcu2.1

— pCV2.1 —
cct ttc att gaa gta tgg tgg ggc cgc aac tac tgg ccc cca atg gag aag ctc gtc tac att
48 50
PRO-PHE-ASN-GLU-VAL-TRP-GLY-ARG-SER-TYR-CYS-ARG-PRO-MET-GLU-VAL-TYR-ILE-

— pCV2.1 —
6CA GAT GAA CAC CCT ATT GAA GTG TCT CAT ATA TTC AGT CCG TCA TGT GTC CTT CTG ACT
68 70
GLA-ASP-GLU-HIS-PRO-ASN-GLU-VAL-SER-HIS-ILE-PHE-SER-PRO-SER-PRO-SER-GLU-LEU-LEU-SER-

FIG. 41

CGC TGT ACT GCC TGC TGT CCT GAC GAG GGT CTC CAC TGT CTG CCC CTA AAG ACA GCC AAC
88 ARG-CYS-SER-GLY-CYS-CYS-GLY-ASP-GLU-GLY-LEU-HIS-100 CYS-VAL-ALA-LEU-LYS-THR-ALA-ASN-

ATC ACT ATG CAG ATC TTA AAG ATT CCC CCC ATT CGG GAT CCT CAT TCC TAC GTG GAG ATG
108 ILE-THR-MET-GLN-ILE-LEU-LYS-110 ILE-PRO-PRO-ASN-ARG-ASP-PRO-HIS-SER-TYR-VAL-GLU-MET-

ACA TTC TCT CAG CAT GTC CTC TGC GAA TCC AGG CCT ATT CTG GAG ACG ACA AAG GCA GAA
128 THR-PHE-SER-GLN-ASP-VAL-LEU-CYS-GLU-LEU-130 CYS-ARG-PRO-ILE-LEU-GLU-THR-LYS-ALA-GLU-
138 ARG *

→
AGG TAA
138 ARG *

FIG. 4M

— p5-15 —
A ACC ATG AAC TTT CTG CTC TCT TGG GTG CAC TGG ACC CCT GCT TAA CTG CTC TAC CAC CAT
1 10 20
MET- ASN- PHE- LEU- LEU- SER- TRP- VAL- HIS- THR- LEU- TYR- LEU- ALA- LEU- HIS- HIS-

p5-15

21 AAG TGG TCC CAG GCT GCA CCC ACG ACA GAA GGG GAG CAG AAA GCC CAT GAA GTG GIG

30 ALA-PRO-THR-THR-GLU-GLU-GLN-LYS-ALA-HIS-GLU-VAL-VAL-40

49 L13 L16

5
EIG

101 GTC ACT ATG CAG ATC ATG CGG ATC AAA CCT CAC CAA AGC CAG CAC ATA GGA GAG ATG AGC
110 UAL-THR-MET-GLN- ILE- MET- ARG- ILE- LYS- PRO- HIS- GLN- SER- GLN- HIS- ILE- GLY- GLU- MET- SER-
120 L46

FIG. 5A

FIG. 5B

CGT ACT TGC AGA TGT GAC AAG CCA AGG CGG TGA
 181 ARG-THR-CYS-ARG-CYS-ASP-LYS-PRO-ARG-
 plw-3

FIG. 5C

FIG. 6

FIG. 6A

CTG TGA
158 *
LEU

FIG 6B

pcU2.1 —————→ 202 —————→ 202 —————→ 202 —————→ 202

ATG CTC GCC ATG AAG CTG TTC ACT TGC TTC TTG CAG GTC CTA GCT GGG TTG
1
 MET- LEU- ALA- MET- LYS- LEU- PHE- THR- CYS- PHE- LEU- GLN- VAL- LEU- ALA- GLY- LEU-

GCT GTA CAC TCC CAG GGG GCC CTG TCT GCT GGG AAC AAC TCA ACA GAA ATG GAA GTG GTG
20
 ALA- HIS- SER- GLN- GLY- [ALA- LEU- SER- **ASN**] SER- THR- GLU- MET- GLU- VAL- VAL-

CCT TTC ATT GAA GTG TGG GGC CGC AGC TAC TGC CGG CCA ATG GAG AAG CTG GTG TAC ATT
40
 PRO- PHE- ASN- GLU- VAL- TRP- GLY- ARG- SER- TYR- CYS- ARG- PRO- MET- GLU- LYS- LEU- TYR- ILE-

GCA GAT GAA CAC CCT ATT GAA GTG TCT CAT ATT TTC ATG CCG TCA TGT GTC CCT CTG AGT
60
 ALA- ASP- GLU- HIS- PRO- ASN- GLU- VAL- SER- HIS- ILE- PHE- SER- PRO- SER- CYS- VAL- LEU- LEU- SER-

FIG. 7

pcU2.1

CGC TGT AGT GCC TGC TGT GGT GAC GAG GGT CTG CAC TGT GTG GCG CTA AAG ACA GCC AAC
88 ARG-CYS-SER-GLY-CYS-CYS-GLY-ASP-GLU-GLY-LEU-HIS-CYS-VAL-ALA-LEU-LYS-THR-ALA-[ASN-]
98

pcU2.1

ATC ACT ATG CAG ATC TTA AAG ATT CCC CCC AAT CGG GAT CCA CAT TCC TAC GTG GAG ATG
100 ILE-THR-MET-GLN-ILE-LEU-LYS-ILE-PRO-PRO-ASN-ARG-ASP-PRO-HIS-SER-TYR-VAL-GLU-MET-
110

pcU2.1

ACA TTC TCT CAG GAT GTA CTC TGC GAA TGC AGG CCT ATT CTG GAG ACG ACA AAG GCA GAA
120 THR-PHE-SER-GLN-ASP-VAL-LEU-CYS-GLU-LEU-CYS-ARG-PRO-ILE-LEU-GLU-THR-THR-LYS-ALA-GLU-
130
138 → AGG TAA
138 ARG *

FIG. 7A

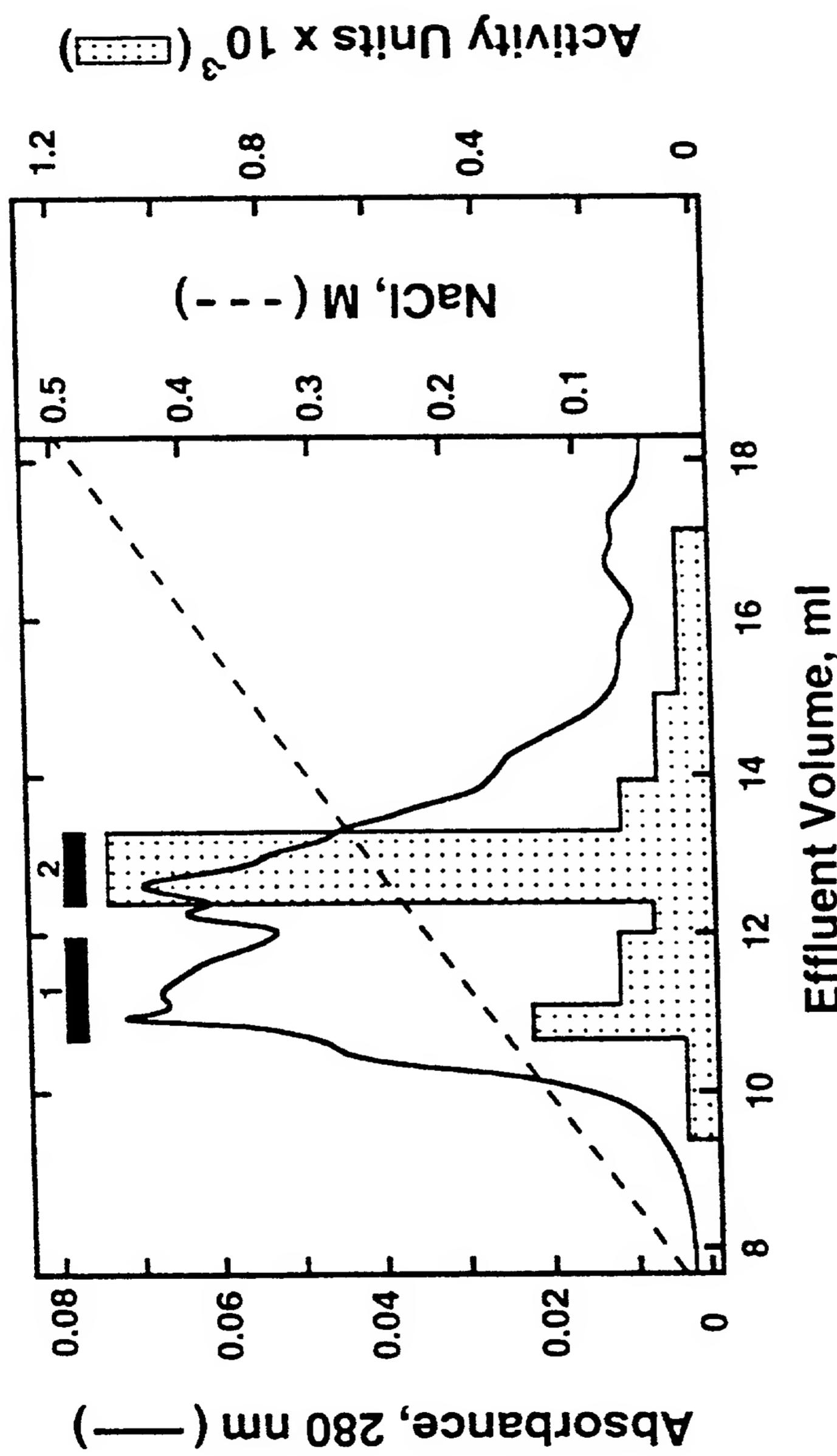


FIG. 8A

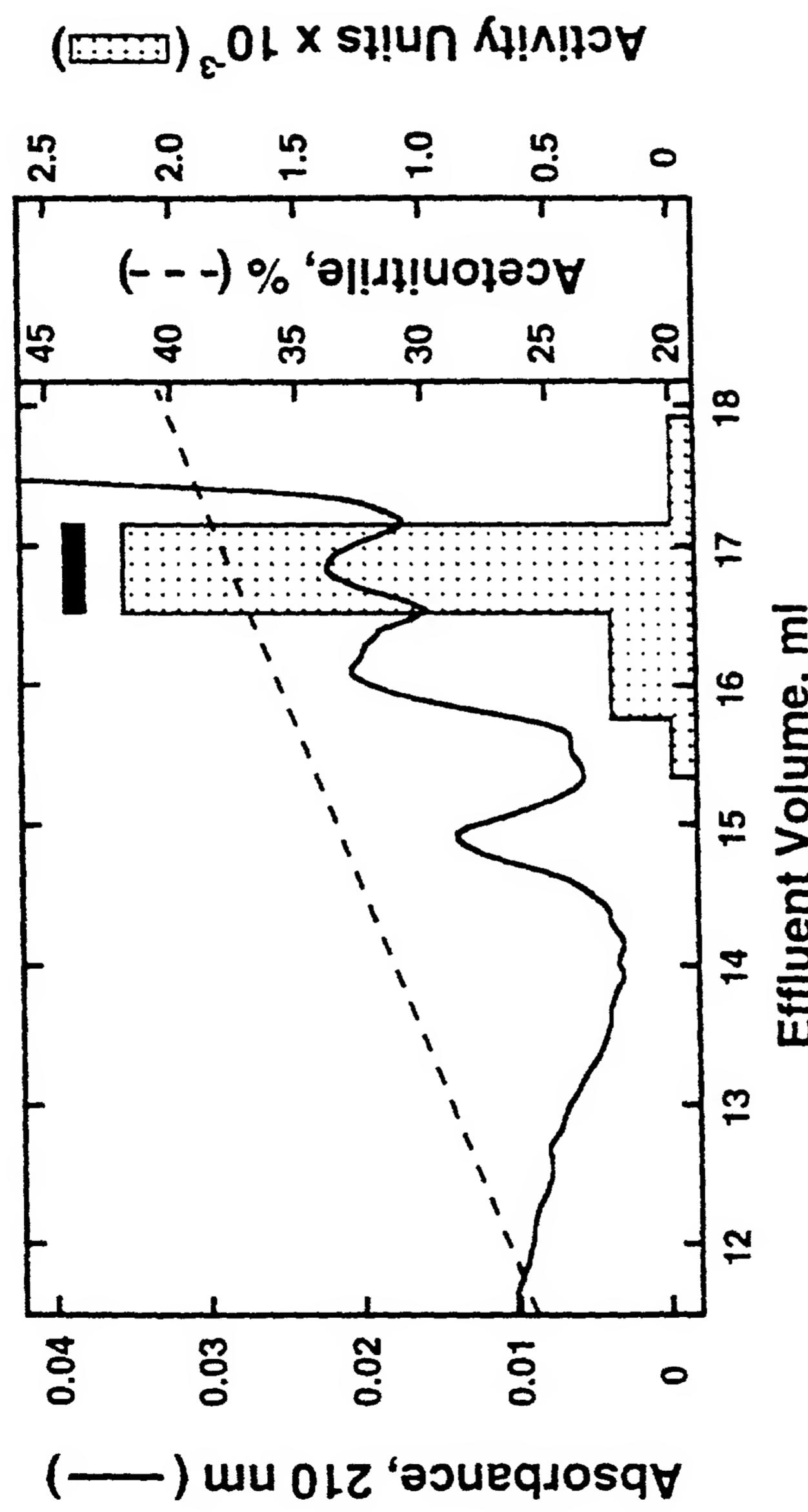


FIG. 8B

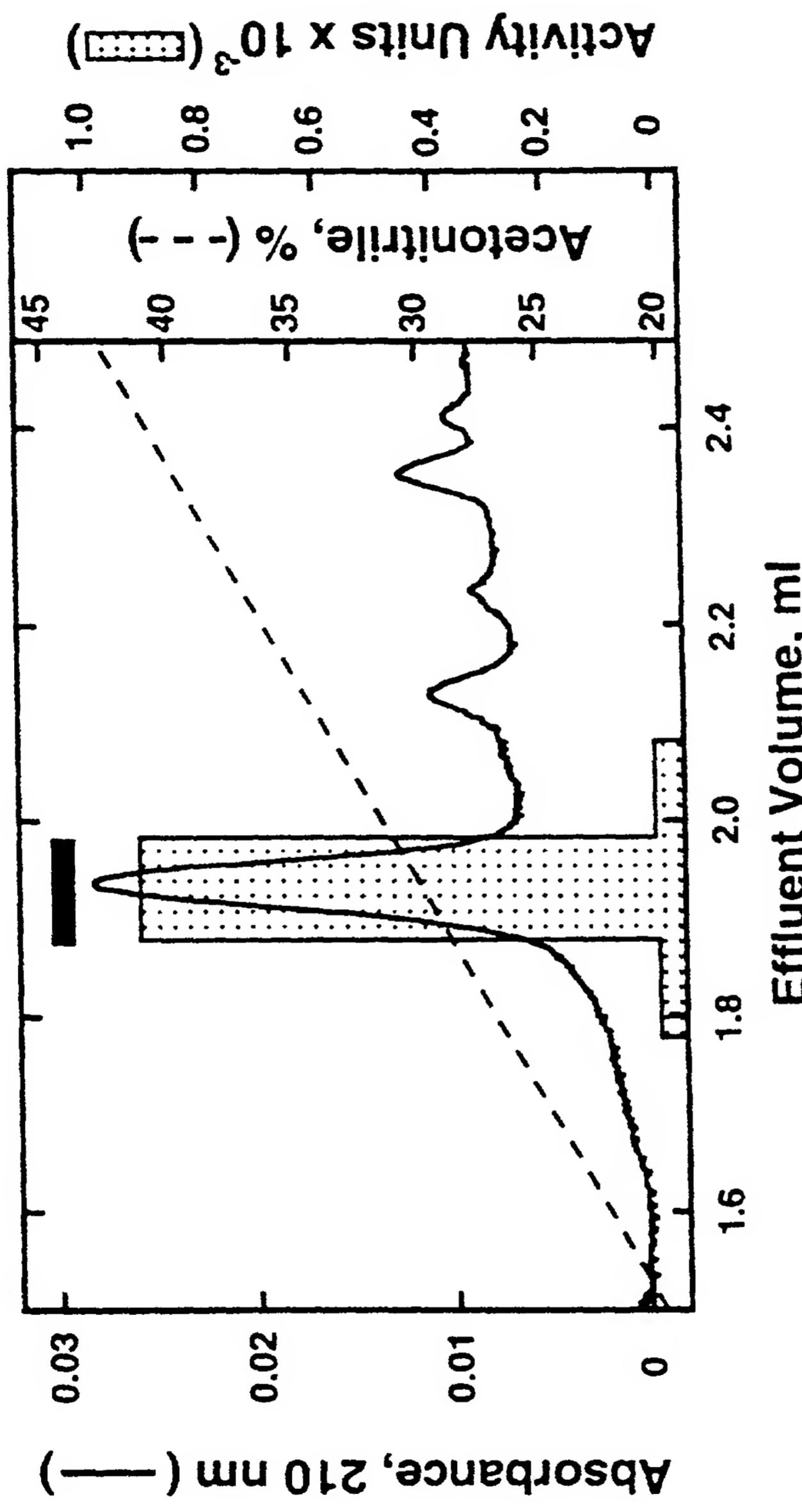


FIG. 8C

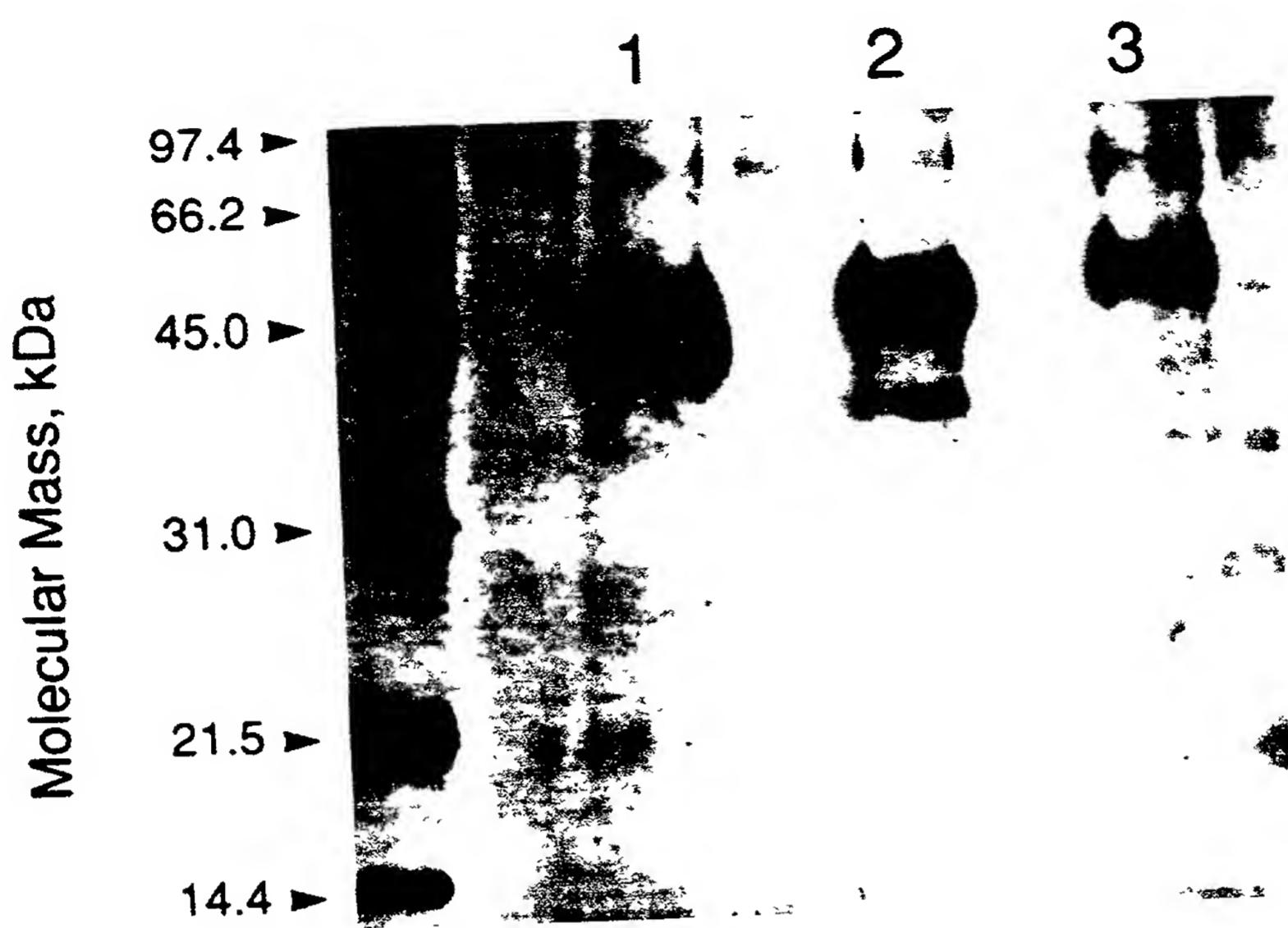


FIG.9A



FIG.9B

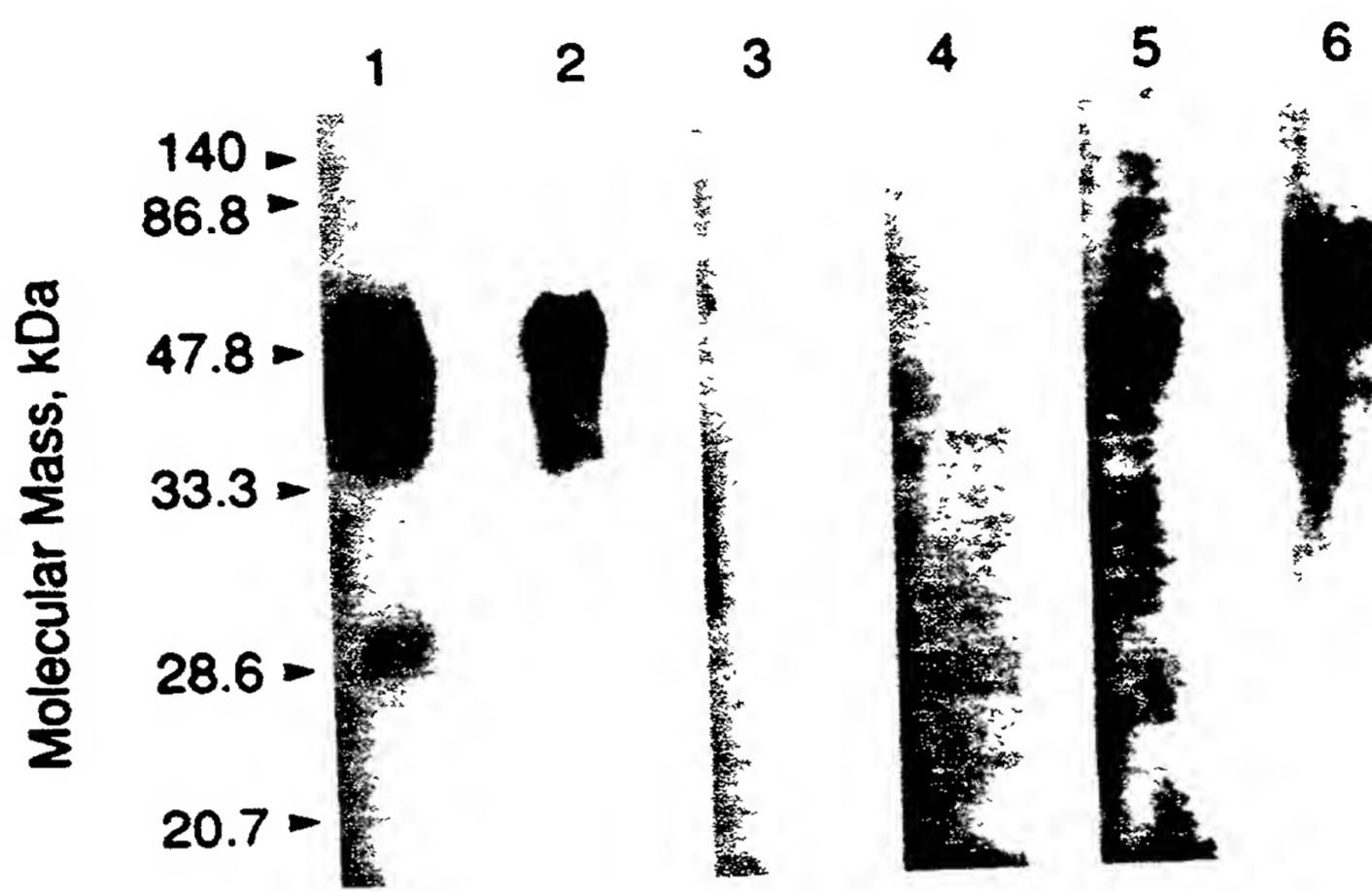


FIG.10A

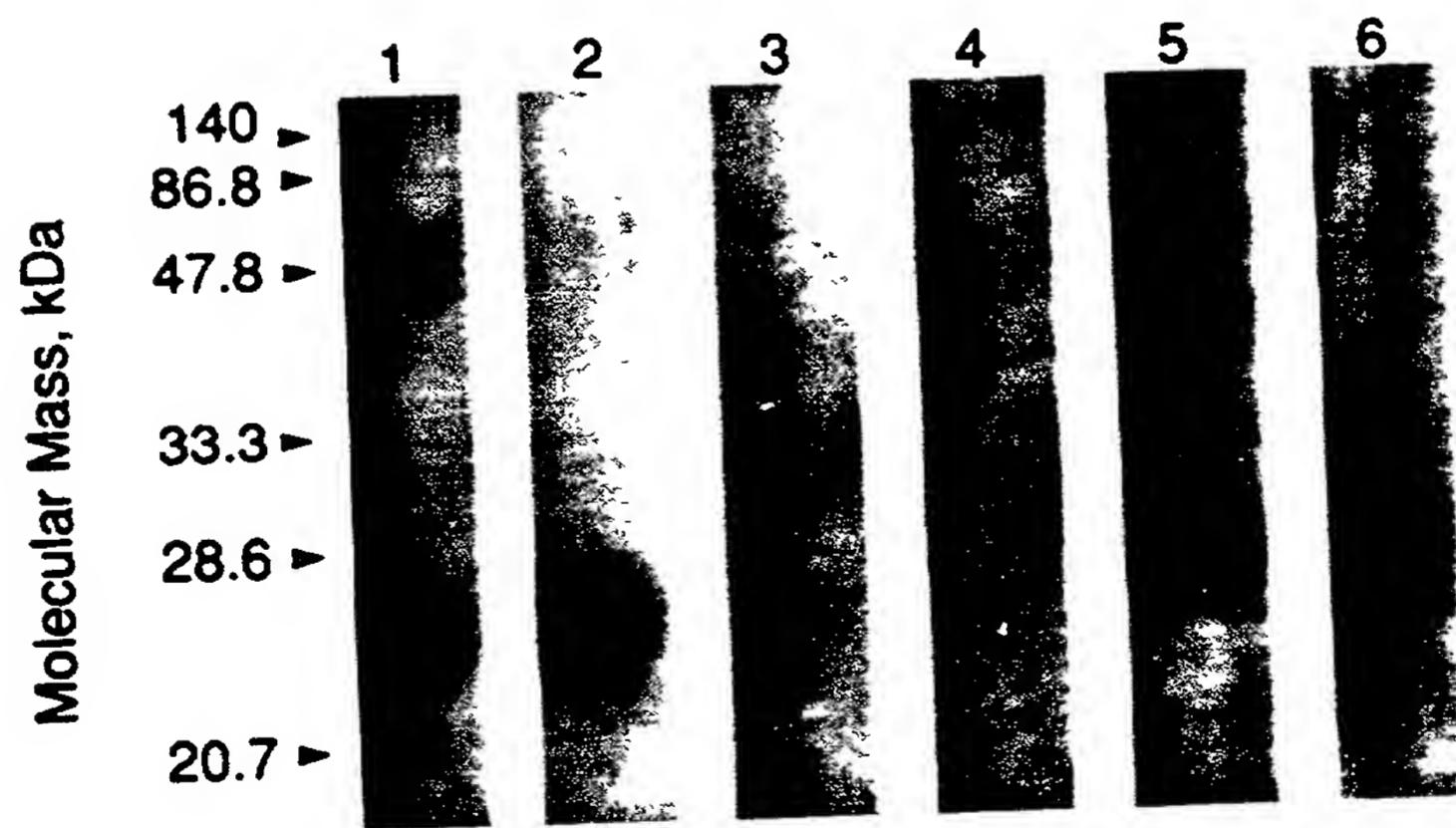


FIG.10B

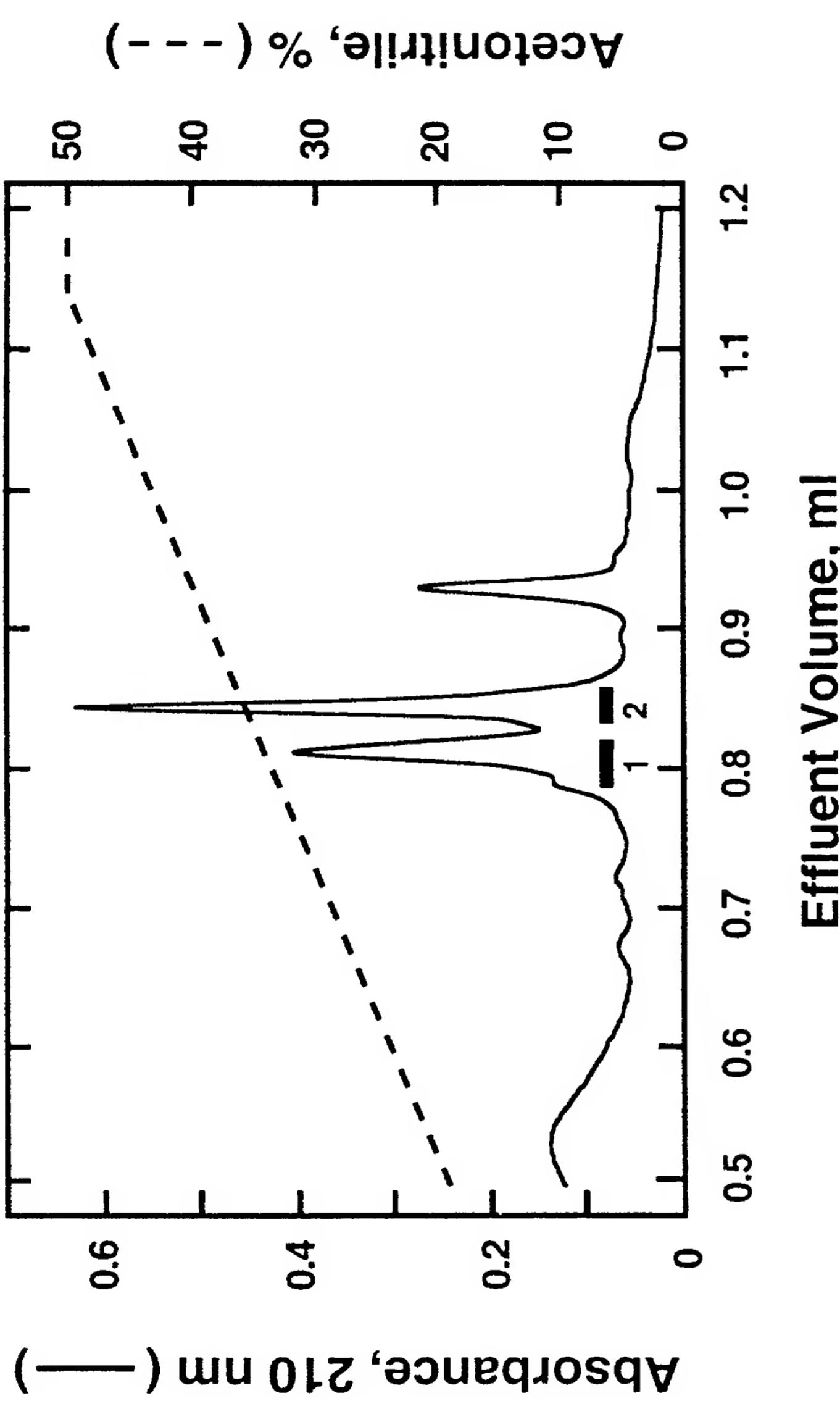


FIG. 11